

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 26 APR 2006

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Applicant's or agent's file reference	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/EP2004/010630	International filing date (day/month/year) 20.09.2004	Priority date (day/month/year) 10.12.2003
International Patent Classification (IPC) or national classification and IPC INV. A23G9/02 C07K14/415		
Applicant UNILEVER PLC et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 1 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 23.02.2005	Date of completion of this report 25.04.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Popa, M Telephone No. +49 89 2399-7829	



**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/010630

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-16 as originally filed

Claims, Numbers

1-10 filed with telefax on 10.04.2006

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* *If item 4 applies, some or all of these sheets may be marked "superseded."*

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/010630

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-10
	No: Claims	-
Inventive step (IS)	Yes: Claims	1-10
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: EP-A-1 158 866 (UNILEVER) 5 December 2001

D2: US-A-5 676 985 (WU YALING ET AL) 14 October 1997

2. The newly submitted claims fulfill the requirements of Art. 34(2)(b) PCT. Support for the newly introduced feature can be found *eg* in p. 7 l. 17 of the description as originally filed.
3. Present application meets the requirement of Art. 33(1) PCT because the subject-matter of all claims is new in the sense of Art 33(2) PCT. No document disclose a plurality of individual elements that flow free, each element being an unaerated dairy frozen confection.
- 3.1. Document **D1**, which is considered to represent the most relevant state of the art to claim **1**, discloses in example 8 a frozen confectionary product comprising a plurality of discrete unaerated dairy frozen confections, each discrete frozen confection being able to contact directly other discrete frozen confections in the product (*ie* the layers beneath and above), which frozen confections comprise an ISP and have an average volume of less than 1 ml (calculations). As mentioned above, **D1** does not disclose a free-flowing mass of discrete beads but a single multilayered icecream confection. The objective problem to be solved would be how to induce free-flowability to a mass of frozen confectioneries. The solution found by the inventors is to add ISP to the composition. Despite ISP containing frozen products are envisaged in the available prior art, this problem was not addressed in any available document and therefore no hints can be found that would prompt the skilled person to arrive at the solution as claimed.

As consequence, the subject-matter of the independent claim **1** involves an inventive step in the sense of Art 33(3) PCT.

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(SEPARATE SHEET)**

International application No.

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- 3.2.** Dependent claims, whose subject-matter is comprised in the scope of the independent claim 1, and as such also meet the requirements of the PCT with respect to novelty and inventive step.

* * *

CLAIMS

1. A frozen confectionery product comprising a plurality of discrete unaerated dairy frozen confections which are able to move relative to each other, each discrete frozen confection being able to contact directly other discrete frozen confections in the product, which frozen confections comprise an ice structuring protein (ISP) and have an average volume of less than 1 ml.
2. A product according to claim 1 which comprises at least 10 discrete frozen confections.
3. A product according to claim 1 which comprises at least 100 discrete frozen confections.
4. A product according to any one of the preceding claims wherein the discrete frozen confections have an average volume of less than 0.5 ml.
5. A product according to any one of claims 1 to 4 which is an unaerated ice cream or milk ice.
6. A product according to claim 5 which comprises at least about 15 wt% solids.
7. A product according to claim 5 which comprises from about 2 wt% to 15 wt% fat.
8. A product according to any one of the preceding claims wherein the ISP is a fish type III ISP.
9. A product according to claim 8 wherein the ISP is type III AFP HPLC-12.
10. A product according to any one of the preceding claims wherein the frozen confections comprise at least 0.0005 wt% of the ISP.